



# 10<sup>TH</sup> INTERNATIONAL TOURNAMENT OF YOUNG MATHEMATICIANS



PARIS 2018

## A team competition

The ITYM is a competition for teams of 4 to 6 high school students and 1 or 2 team leaders. The team emulates a small research group: its members work together on the problems over a period of several months.



Team leaders can be research mathematicians, teachers, or university students, with sufficient mathematical background to lead the team. Their role is not to do the team's work, but to guide them!

## An international meeting

As an international competition for high school students, ITYM is a place to do math and make friends with people from many different countries. Participants discover different ways of thinking and improve their mathematical and communication skills.

The tournament is a moment of mathematical interaction between participants, thanks to mathematical debates and numerous opportunities to spend time with other teams.



## Open research problems



Unlike the IMO, the ITYM problems are open: their authors do not know the solution. The problems are proposed by international mathematicians and are often based on their current research work.

The problems of the ITYM are published every year in March. The participants have until June to work on the problems and to write up reports on their results.

They may use various techniques, and even propose additional questions.

## The Tournament

During the Tournament, all the participating teams gather in Paris to present and discuss their results.

They present their work to each other and to an international jury of mathematicians.



After each presentation, other teams ask questions to the defender. The discussion turns into a debate: this is often the occasion to find new results or to improve others. The jury also asks questions to everyone.

At the end, the jury gives marks to each team, both for written and oral performances.

## Freedom of research



The participants are free to go their own way in solving the problems: by either following the intermediate questions, or choosing different approaches.

In both cases, they must master the concepts they use and be able to explain them. The team leaders are here to provide some advice.

## Lasting memories

The Tournament is very dense but there is still plenty of time for social events: sports, excursion, music. Whether mathematical or not, the interaction between the participants is very intense and provides lasting memories.



## Program

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
Morning	Quizz	Team work		EXCURSION	Team work	Final
	Opening		Round 2			Visit
Afternoon	Round 1		Sports			Closing

## New teams welcome!

The ITYM is an open tournament: our goal is to increase the number of teams and countries.

If you wish to participate in the ITYM, the application procedure is detailed online. The registration and selection process takes place in April.

Some countries organize national competitions based on ITYM rules, but alternative options are possible. Teams must be backed up by a national institution that certifies the academic level of the students.

The International Organizing Committee can provide training material



## Forming a team



Team members need to be fully committed to the tournament; indeed, research on the problems lasts for several months. During this time, members of a team usually meet once a week to work together.

The participants must develop an appropriate level of understanding of the problems by reading background material in related fields.

Team leaders coordinate the team, make sure they work regularly, provide technical material and prevent students from reaching deadlocks.

## In July 2018

The tournament will take place for a whole week in early July.

2018 will be the tenth edition of the tournament.



## The organizing committees

ITYM is organized by the International Organizing Committee (IOC) which delegates the practical organization of the tournament to a Local Organizing Committee (LOC).

For ITYM 2018 in France, the LOC is part of the association Animath. Animath is the national leader in animating mathematical competitions for students.

## In Paris

After Bremen (2014), Sofia (2015), Saint Petersburg (2016) and Iasi (2017), the 2018 ITYM will come back to Paris, where the first edition took place in 2009.

The event will be hosted by some of the greatest French scientific institutions.

